

Date: Thu, 25 Mar 93 04:30:15 PST  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #374  
To: Info-Hams

Info-Hams Digest                      Thu, 25 Mar 93                      Volume 93 : Issue    374

Today's Topics:

    \$40.00 Radio Shack SWR meter problems  
    Help: study guide for 4A & 4B exams.  
        Icom W2A Power Plug  
    Nicad Memory Effect-Fact or Myth?  
    Remote (DTMF) controlling a TM-741A  
    Summary: Using 75 Ohm Hardline

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Wed, 24 Mar 1993 20:39:28 GMT  
From: sdd.hp.com!zaphod.mps.ohio-state.edu!uwm.edu!spool.mu.edu!mixcom.com!  
mei.mon@network.UCSD.EDU  
Subject: \$40.00 Radio Shack SWR meter problems  
To: info-hams@ucsd.edu

I recently went to AES here in Milwaukee to by a tiny, hand-held  
2m/70cm band SWR meter made by Commet. AES had it for around \$70.00.

They were out, so the salesman said Radio Trash had the same one (with  
the RS logo) for only \$40.00. Well they did, so I bought it. However,  
it appears to be WAY OFF.

I plugged in my Alinco DJ580T running at 5 watts on 446 MHz and tested  
SWR and power output into my Cushcraft mag-mount mobile. Radio Shack's  
little dream machine said SWR was only 1.1 (okay maybe it IS that good)  
and that power output was 12 Watts! I know for sure that the DJ580 does

NOT put out 12 watts! Does anyone else out there have experience with this thing (or the Commet version)?

Also, this little wonder has NO calibration pots for SWR! How accurate can it be? I thought the procedure was to transmit (while zeroing the meter) and then transmit again and read the SWR. This thing just has two switches, one for 15 or 50 watts full scale, and another for SWR or POWER.

-----  
Kevin Jessup, N9SQB

Temporarily using our companies corporate account. Many other individuals use it as well. Please state in any E-mail follow-ups that the mail is intended for me so as to avoid confusion. Thanks.

Marquette Electronics, Inc. account information follows...  
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--  
mei.mon@mixon.com

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Date: 25 Mar 1993 05:20:04 GMT  
From: swrinde!gatech!concert!lester.appstate.edu!lester.appstate.edu!  
usenet@network.UCSD.EDU  
Subject: Help: study guide for 4A & 4B exams.  
To: info-hams@ucsd.edu

In <1993Mar24.164337.25413@hemlock.cray.com> dadams@cray.com writes:

(stuff deleted)

> I notice that the exam for "Advanced" class uses many more pictures than  
> the exam for "General". I also notice that Radio Shack does not carry  
> a study guide for Advanced or Extra.

Last week the Radio Shack in Boone, NC, which had been just done over to be a "new Radio Shack" started carrying a Gordon West Radio Shack Advanced study guide, comparable to the General that they have carried for some time. Perhaps your store has the material which said "New!!" on its packaging.

Marv Hoffman, KD4EGV

Appalachian State University  
Boone, NC

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Date: Thu, 25 Mar 1993 06:42:17 GMT  
From: usc!zaphod.mps.ohio-state.edu!moe.ksu.ksu.edu!hobbes.physics.uiowa.edu!  
news.iastate.edu!jdwhite@network.UCSD.EDU  
Subject: Icom W2A Power Plug  
To: info-hams@ucsd.edu

In article <1opmn5\$167@usenet.INS.CWRU.Edu> cs684@cleveland.Freenet.Edu (Charles  
G. Lafkoff) writes:

>  
>Is the 12 volt plug used for this handheld a "propriety" ICOM plug?

As far as I can tell....yes. I've owned a 2SRA since October '91 and have  
searched and searched for a third party plug without success. Radio Shack has  
a plug that looks similar except that the center pin is \*much\* too  
large--don't even try it. You'll just have to pay the \$7 like the rest of us.  
-Jason

--  
Jason White // Internet: jdwhite@iastate.edu  
Durham Center Operations // Packet: NORWU@N0AN.IA.USA.NA  
95 Durham Center, ISU //  
Ames, Iowa 50011-2041 // NORWU, V.P. Cyclone Amateur Radio Club

-----  
Date: Wed, 24 Mar 1993 09:59:17  
From: news.service.uci.edu!cerritos.edu!arizona.edu!zippy.telcom.arizona.edu!  
nauvax.ucc.nau.edu!cvm@network.UCSD.EDU  
Subject: Nicad Memory Effect-Fact or Myth?  
To: info-hams@ucsd.edu

In article <1993Mar24.000732.3312@ke4zv.uucp> gary@ke4zv.uucp (Gary Coffman)  
writes:

>There was also an article in QST featuring a microprocessor  
>controlled charger that does it right. Basically you want a pulse  
>charger that supplies a test load to the battery between pulses and  
>looks for the characteristic voltage "droop" that occurs when a NiCad

Was this article a review of a commercial charger or a project to build?  
Which issue of QST was it in?

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Chris Michels -- Systems Programmer                   cvm@nauvax.ucc.nau.edu  
Northern Arizona University -- Flagstaff, AZ       cvm@nauvax.bitnet  
Phone: (602) 523-6495                               N7YIU  
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Date: Wed, 24 Mar 1993 19:49:48 EST  
From: uunet.ca!xenitec!lemsys!clemon@uunet.uu.net  
Subject: Remote (DTMF) controlling a TM-741A  
To: info-hams@ucsd.edu

Hello all. I have heard recently, from several unconnected sources, that the Kenwood TM-741A w/DTU-2 and the 732/742 can be remotely controlled by another DTMF transceiver (ala Alinco DR-500/599/600 and ICOM IC-2410A/H). Several 741 owners in my area and myself are wondering exactly how you go about doing this. I understand the reason that Kenwood did not publish this info (license restrictions), but I (and these other people) are all advanced class amateurs. In my case, I am shopping for a dual-band mobile and couldn't make up my mind between the popularity and flexibility of the 741 and the remote control capabilities of the DR-600. If I can get this info, my mind is made up!

If you wish, email your response if you are concerned about other license classes violating regulations (they may vary in your country). Again, \_any\_ information on 741, 742 and 732 remote control capabilities would be greatly appreciated.

Thanks in advance and 73,

--

Craig Lemon VE3XCL (Advanced) - clemon@lemsys.UUCP <-home-> +1 519 741 0297  
SCHOOL: calemon@sunee.uwaterloo.ca                   | 1B Electrical Engineering  
TCP/IP: ve3xcl@ve3xcl.ampr.org [44.135.84.51]       | University of Waterloo  
AX.25 Packet: ve3xcl@ve3euk.#SWON.ON.CAN.NA       | Waterloo, Ontario, CANADA

-----  
Date: Wed, 24 Mar 1993 22:52:30 EST  
From: usc!howland.reston.ans.net!gatech!psuvax1!psuvm!pts102@network.UCSD.EDU  
Subject: Summary: Using 75 Ohm Hardline  
To: info-hams@ucsd.edu

These are the responses I've got to my question about using 75 ohm CATV hardline in a 50 ohm system. It seems like the best thing to do is buy or build quarter-wave matching transformers, since we will need some kind of solid connection to the hardline anyway, and N connectors are expensive. Thank you all for your responses.

73, Pat NY3X

The Penn State Amateur Radio Club, K3CR

=====  
From: steve@fuzbat.pgh.pa.us

Pat,

No specific \*experience\*, however, a load of electrical engineering training, and a good chart from the ARRL antenna book (highly recommended).

Having looked at a similar problem, I came up with the following chart:

	1/2" 75 Ohm H-line		Belden 9913
Pain Factor	9		3
Cost factor		=	
line loss	0 dB		.5 dB

Note: Pain factor is a combination of having to put connectors on the damned stuff/bend it to get it out of the shack/whatever. The Belden still needs to be sealed (as I understand).

The cost factor came from the fact that the price of the matching transformers for your "free" hardline is higher than the cost of the new 9913.

The loss factors are relative to the hardline (thus 0 dB loss for the hardline).

In general, you aren't talking much loss with the 9913 even at 70 cm with the 9913. I wouldn't hassle with the other stuff.

Steve.

N30IE (brand new call obviously, but, as I said, many years of EE experience).

=====  
From: okas\_rp%ncsd.dnet@gte.com

Pat,

To answer your various questions:

Using hardline 'as is' should be the last resort, and yes, 'N' connectors are preferred since they offer the lowest loss (as compared to 'UHF' connectors). Why not replace all of the S0-239's with N's ?

The transformers are frequency dependent. If you're handy with a propane

torch, you can build them for peanuts. Basically, they are 1/4 wavelength sections of regular 1/2" copper tubing with a brass rod for center conductor. I don't have all of the design details with me, but if you're interested, I can dig them up. My recollection is that they are fairly broad-banded and will cover the band of interest quite easily. BTW, You didn't mention the hardline diameter. Sometimes it's easier to use a plumbing reducer from, say 3/4" dia cable to the 1/2" transformer instead of fooling around with all of those N connectors.

=====  
From: Scott Dorsey <kludge@grissom.larc.nasa.gov>

I work for a small community radio station where we are actually using a 75 ohm (homebrew) antenna, 75 ohm hardline, and a matching stub at the transmitter. It's been very successful and we get a great signal out.

However, I copy the following previous posting to rec.ham-radio:

>From: durham@w2xo.pgh.pa.us (Jim Durham)  
>Newsgroups: rec.radio.amateur.misc  
>Subject: Re: 50 to 75 ohm transformer???  
>Date: 21 Apr 91 04:33:15 GMT  
>Organization: Jim's Basement, Gibsonia, PA

>Basically, you can use the line itself as a "transformer". Any line  
>terminated in a given load repeats that load at 1/2 wave intervals.  
>So, if you terminate a 75 ohm coax line in a 50 ohm load, you merely  
>need to make the line a multiple of 1/2 wave long to see 50 ohms at  
>the input. In a practical situation, this means you trim the line  
>until you get 50 ohms. 1/2 wave at 2 meters is less than 38 inches, so  
>it's pretty easy to leave a couple of extra feet and trim until things  
>look good.

>

>The additional loss caused by the line swr being 1.3 or 1.4 to 1 is not  
>significant. Refer to chart in the ARRL antenna book...

>

>There's lots of this 75 ohm stuff available because folks don't know  
>that it *will* work pretty well.

>

>If you really want to transform the impedance, you need about 17 or  
>18 inches of 62 ohm coax. Hard to find!

>

>-Jim (durham@w2xo.pgh.pa.us)

=====  
From: jdelancy@tecnet1.jcte.jcs.mil

There are several choices to make use of hardline from a CATV outlet.

First, Ham Radio Magazine, Jun 89, page 63 shows how to make your own transformers. If you have someone handy at construction, might be worth a look at.

Second, W8ZD does indeed make hardline matching transformers. Each adapter consists of an appropriate connector and a quarter wave matching section which connects on the end of the hardlines. W8ZD says typical attenuation for 1/2 CATV using his connectors is .90 DB at 150 Mhz 1.11 at 220 and 1.57 at 450.

Third, like one of the ARRL staff engineers said last time this subject came up, don't worry about it, take the loss which is small enough (comparing 75 to 50 ohm hardline to rig connections).

jd

=====  
From: gary@ke4zv.uucp (Gary Coffman)

>[use the coax as-is]

I've done this. The loss is low enough that the 1.5:1 SWR isn't a big concern for most things. There are standard type N fittings available for the common CATV hardline, or you can kludge on some PL259s with a couple of plumbing fittings.

>[tune the antenna to 75 ohms]

Tuning the antenna can help, but you need the right instrument, a 75 ohm SWR bridge, or you'll be lost. A simple tuner can be built to match the rig end of the cable to 75 ohms.

>[use transformers]

This is probably the best solution. The ZD Engineering transformers are quarterwave sections of air line. They are designed to fit directly on the CATV cable through a compression fitting (supplied), and they have a type N fitting on the other end. Being quarterwave lines, they are frequency selective, but do fine across the important parts of 2 meters and 70 cm. Considering the cost of hardline connectors, ZD is a bargain.

Gary

=====  
From: alanb@hpnmdla.sr.hp.com (Alan Bloom)

>[buying N connectors]

Yeah, and they are expensive. The 75 ohm connectors have a smaller diameter center pin than 50 ohm. You can't plug a male 50 ohm into a female 75 ohm without distorting the female center pin. I have seen a number of homebrew adapters for 75 ohm hardline. What I once did was to use a double-female

(barrel) UHF connector. Its outer diameter was the same as the OD of the hardline I was using, and the center pin was a nice press fit to the hardline center conductor. I used a pair of hose clamps to clamp a small length of aluminum pipe over the connector and hardline and then weather-proofed the whole thing with epoxy.

>[ZD Engineering transformers]

They are probably 1/4-wave matching sections, which would be frequency-sensitive.

What I did is a combination of your second and third alternatives. To tune the antenna for 75 ohms, I temporarily connected a 150-ohm non-inductive resistor in parallel with the feedpoint and tuned for lowest SWR on a 50-ohm SWR meter.

At the radio end of the coax, I built a matching network in a minibox. I used a simple "L" network with L and C selected to match 50 to 75 ohms. It's plenty broadband enough for a ham band.

AL N1AL

=====

From: alanb@hpnmdla.sr.hp.com (Alan Bloom)

In rec.radio.amateur.misc, gary@ke4zv.uucp (Gary Coffman) writes:

>This is probably the best solution. The ZD Engineering transformers are  
>quarterwave sections of air line. They are designed to fit directly on  
>the CATV cable through a compression fitting (supplied), and they have  
>a type N fitting on the other end. Being quarterwave lines, they are  
>frequency selective, but do fine across the important parts of 2 meters  
>and 70 cm. Considering the cost of hardline connectors, ZD is a bargain.

Seems like the 2 meter version should also work on 432 MHz. (3/4 wave is an odd multiple of 1/4 wave.) Then you could use the same coax for both bands, with an antenna switch up on the tower.

AL N1AL

=====

From: gary@ke4zv.uucp (Gary Coffman)

In article <14570694@hpnmdla.sr.hp.com> alanb@hpnmdla.sr.hp.com (Alan Bloom) writes:

>In rec.radio.amateur.misc, gary@ke4zv.uucp (Gary Coffman) writes:

>

>>[ZD transformers are quarter-wave sections of air line]

>

>[2 meter version will work at 432 mhz ]

Yeah, I tried that, but for satellite you want duplex so I got a set of the 70 cm transformers for the other line. I used to have a box



at the tower top containing several Transco relays in a matrix and a couple of preamps, but CATV cable is too cheap ( I got a free spool) to bother with the hassle of a bunch of very expensive relays at tower top. Now I have two transmit lines of CATV coax, and two receive lines of 9913 on the tower for 145 and 435 MHz. Only two TR relays are required at the power level I'm using. If I were running high power, I'd need two sequenced relays per band. For 1269 MHz I remote mount the transverter and amp in a box on the tower and run 9913 down to the two meter IF rig. Even CATV line has too much loss at 1269 MHz. I run power and control cables through EMT conduits to the tower top box.

Gary

=====

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Patrick T. Saxton pts102@psuvm.psu.edu pts@ec1.psu.edu packet: w3ya

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Date: 25 Mar 1993 05:55:38 GMT

From: usc!cs.utexas.edu!geraldo.cc.utexas.edu!geraldo.cc.utexas.edu!

usenet@network.UCSD.EDU

To: info-hams@ucsd.edu

References <log86jINNir0@emx.cc.utexas.edu>, <1oq2da\$56e@slab.mtholyoke.edu>, <C4EMAs.DGA@news.iastate.edu>

Subject : Re: no-coders, scum of the earth

I'm truly amazed at y'all.

Really, is it just me that Derek's humour is wasted on? Let me translate. (It's not funny when you have to explain it.)

"This whole thread is ridiculous, and this attitude about no-code techs is wrong. Not only is it wrong and inaccurate, but it's stupid and kinda bass ackwards."

Note the bad grammar (dem no-good ..." etc. Also, note that he says that he himself is "no good lazy ..." etc. Also note that his call and the call of the offending station are both Extra class calls. (Let me hasten to add that Derek is one of the finest ham operators I know. I would not in a zillion years lump him with the guy making fake distress calls.)

Anyone ever heard of satire? I think it was very effective here. I seem to recall "A Modest Proposal" by Johnnathan Swift--a little satirical piece on the different ways that children should be prepared for fine dining (as the main course, not as participants.) Amazing how many people took it seriously.

C'mon guys. Please try and distinguish between true flamage and other things that are not. I truly cannot believe that I'm the only one who got it. (I probably wasn't, but ... )

See, it really isn't funny once you have to explain it!!!!

73,

--

Buddy Brannan, KB5ELV, Riff-Raff #4

The World's Youngest Old Fart :-)

Internet: davros@cccwf.cc.utexas.edu

"One foot in a brave new world, one foot still in bed ..."

--from Those Who Dig: "Mr. Banana Head"

-----  
Date: 24 Mar 93 20:01:36 GMT

From: biosci!joes!shibumi@ames.arpa

To: info-hams@ucsd.edu

References <1993Mar19.183613.16025@en.ecn.purdue.edu>,

<1993Mar19.193848.11841@mnemosyne.cs.du.edu>,

<paulf.732582844@abercrombie.Stanford.EDU>

Reply-To : shibumi@joes.garage.com

Subject : Re: Motorola HTs

paulf@abercrombie.Stanford.EDU (Paul Flaherty) writes:

>A guy I knew at the Milwaukee Motorola repair depot used to tell of a radio  
>that would periodically reappear on his bench, sometimes complete with  
>bits of flesh or hair. Seems that one 'waukee cop preferred it over his  
>nightstick...

The cop in question got the moniker 'Radio Man'. He far preferred his MX500  
to his nightstick. What the hell, they are both department issued equipment.

Kenton A. Hoover	
P.O. Box 882643	+1 415 957 3614
San Francisco, Kalifornia 94188-2643	shibumi@joes.garage.com
=====442.075+100=146.850+=444.625+131.8=440.900+114.8=====	
"We're gonna bust the high school students	
'Cause they've been smoking dope	
Suspension from school for breaking the rules	
Will teach them a lesson, I hope (we really mean it)	
I can hear the jackboots tromping	
Down the empty halls	
We're gonna stop the high school students	
If we have to bust them all	
Boom shakka lakka lakka	-- Austin Lounge Lizards
Boom shakka lakka lakka	"Bust the High School Students"
Yea, team!"	

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Date: Wed, 24 Mar 1993 14:14:54 GMT  
From: sdd.hp.com!spool.mu.edu!mixcom.com!mei.mon@network.UCSD.EDU  
To: info-hams@ucsd.edu

References <1oake0INNgt8@topaz.bds.com>, <1octrkINNlir@meaddata.meaddata.com>,  
<LINNIG.93Mar19152429@m2000.dseg.ti.com>  
Subject : Re: White House To Auction Airwaves

I did not catch the beginning of this thread but the potential loss  
of ANY of the amateur radio spectrum concerns me. Should I choose to  
write my congress critter, what house/senate/FCC document should I  
refer to? Thanks.

-----  
Kevin Jessup, N9SQB

Temporarily using our companies corporate account. Many other  
individuals use it as well. Please state in any E-mail follow-ups  
that the mail is intended for me so as to avoid confusion. Thanks.

Marquette Electronics, Inc. account information follows...

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mei.mon@mixcom.com  
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End of Info-Hams Digest V93 #374  
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